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Making Sense of Positive Self-Evaluations in China:

The Role of Sociocultural Change

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### Abstract

Recent research points to Chinese people's elevated tendency to make positive self-evaluations, despite the general claim that East Asians do not self-enhance. We present three studies in support of a novel prediction that sociocultural change in China plays an important role in augmenting self-enhancement. We operationalized self-enhancement primarily in terms of the better-than-average effect (BTAE) and accounted for trait desirability or importance. We found that: 1) compared with Chinese Canadians, Chinese showed a stronger BTAE; 2) within the Chinese, identification with contemporary Chinese culture uniquely predicted a stronger BTAE; 3) priming contemporary (vs. traditional) Chinese culture led to a stronger BTAE. Finally, we provided further evidence that motivation, in part, underlies the rising Chinese BTAE. We conclude by discussing the importance of both socioeconomic and cultural perspectives for understanding how and when of East Asian self-enhancement.

*Keywords:* self-evaluations, self-enhancement, sociocultural change, culture, China

### Making Sense of Positive Self-Evaluations in China: The Role of Sociocultural Change

The interest in the universality of self-enhancement is underscored by several meta-analytical exchanges (e.g., Heine, Kitayama, & Hamamura, 2007; Sedikides, Gaertner, & Vevea, 2005, 2007). The preponderance of evidence reviewed thus far points to the failure of various self-enhancement effects demonstrated in Western populations to be generalized in East Asia (Heine & Hamamura, 2007). However, recent research has revealed some exceptions (for recent reviews, see Boucher, 2010 and Chiu, Wan, Cheng, King, & Yang, 2011). In particular, there have been several lines of evidence indicating the relative prevalence of self-enhancement among the Chinese samples, especially more recent ones (Brown & Cai, 2010; Cai, Kwan, & Sedikides, 2012; Cai, Wu, & Brown, 2009; Mezulis, Abramson, Hyde, & Hankin, 2004; O'Mara, Gaertner, Sedikides, Zhou, & Liu, 2012). The main goal of this article is thus to further our understanding of self-enhancement in the context of contemporary China.

To this end, we advance a novel prediction that sociocultural change in China is augmenting the tendency to make positive self-evaluations. Specifically, we argue that the contemporary form of Chinese culture affords more explicitly self-promoting evaluations. We conducted cross-cultural and within-culture studies to illustrate the effects of individual differences in traditional vs. contemporary cultural identification and contextual activation of traditional vs. contemporary culture on Chinese self-evaluations. To explain how we derived our hypothesis, we first outline recent work on cultural change and suggestive evidence of change in Chinese self-enhancement. A consideration of both points makes plain that understanding self-enhancement in contemporary China

requires looking beyond its historical cultural roots of collectivism. **From Static Cultural Variation to Dynamic Cultural Change**

Cross-cultural work has traditionally focused on comparing relatively distinct populations in order to shed light on cultural influences (e.g., culturally divergent models of the self, Markus & Kitayama, 1991) on psychology and behavior. With regard to self-enhancement, it has been shown that it may be particularly adapted to the purpose of setting oneself apart from others, which is prescribed in contemporary North American culture. In contrast, self-enhancement as typically operationalized in Western psychological research is less sanctioned in East Asian cultures that traditionally value face and interpersonal harmony (Heine et al., 1999). Such cultural variation is borne out by meta-analyses indicating that the expression of self-enhancement is weaker, if not largely absent, in East Asia (Heine & Hamamura, 2007; but see, Sedikides et al., 2007).

However, standard between-culture comparisons risk perpetuating the impression that cultures are static and rigidly bounded entities (Adams & Markus, 2004). Thus, recent research has begun to investigate the within-culture dynamic and specifically, how cultures change over time. The cultural change perspective proposes various socioeconomic factors as key drivers of shifts in broad cultural syndromes (Triandis, 1993) such as individualism-collectivism (Greenfield, 2009). Extant, albeit limited, empirical work lends support to such theoretical linkages. Among the interrelated socioeconomic factors found to be associated with cultural change in the direction of individualism are economic development (Hofstede, 1984; Inglehart & Baker, 2000), urbanization (Greenfield, 2013; Kagitcibasi, 1996), and socioeconomic status gains (Grossmann & Varnum, 2015; Kohn, 2010). Although cultural change resulting from

socioeconomic change does not necessarily eliminate the legacy of distinct cultural traditions (Hamamura, 2012; Zhang, Noels, Kulich, & Guan, 2015), it seems reasonable to expect that as culture changes even if partly, so do psychological tendencies (e.g., self-enhancement) afforded by the part of the culture that is changing. **The Role of**

### **Sociocultural Change in Chinese Self-Enhancement**

The national developmental trajectory of China during the past few decades is marked by unprecedented socioeconomic transformation (for a review, see Kulich & Zhang, 2010). This has spawned a growing body of research documenting the psychological imprints of the socioeconomic changes on the Chinese psyche (e.g., Cai, Feng, Shi, & Luo, 2014; X. Chen, 2010; S. X. Chen, Bond, & Tang, 2007; Egri & Ralston, 2004; Kohn, Li, Wang, & Yue, 2007; Xin, Zhang, & Liu, 2010). For instance, one widely examined consequence of China's fast growing economy is the widening gap between the wealthy and the poor. Economic inequality has been shown to give rise to the national stagnant or declining trend in happiness and life satisfaction (Brockmann, Delhay, Welzel, & Yuan 2009; Easterlin, Morgan, Switek, & Wang, 2012; Knight & Gunatilaka, 2011; also see, Oishi & Kesebir, 2015).

As mentioned before, there is some indication that self-enhancement may be on the rise in contemporary China. Although direct evidence such as longitudinal investigations of self-enhancement in China is still lacking, a convergence of different pieces of indirect evidence – the presence of self-serving attribution bias (Mezulis et al., 2004), the predominant tendency toward positive self-evaluations (Cai et al., 2009), and the intrapsychic benefits of self-enhancement (Brown & Cai, 2010; O'Mara et al., 2012) – is consistent with the interpretation of rising Chinese self-enhancement. Given the

meta-analytic conclusion (Heine & Hamamura, 2007), the Chinese data would be difficult to account for without invoking sociocultural change. Indeed, rising self-enhancement in China has been tied to some aspects of China's ongoing change. First, the rising feeling of entitlement among Chinese youth has been attributed to the implementation of the one-child-per-family policy (Kwan, Kuang, & Hui, 2009), evolving Chinese parenting practices (Way et al., 2013), and the declining importance of modesty as a cultural norm (Cai, 2011). Second, demographic correlates of narcissism, a grandiose form of positive self-worth, suggest that demographic shifts driven by large-scale changes play important roles in the rising level of narcissism in China (Cai, Kwan, & Sedikides, 2012). Third, evidence for the possible role of economic inequality in self-enhancement accrues from a 15-nation study (Loughnan et al., 2011). Cross-national differences in self-enhancement assessed via a better-than-average (BTA) measure were predicted by an index of economic inequality (i.e., Gini coefficients) over and beyond Hofstede's (2001) individualism scores. Of particular comparative interest is the finding that compared with Japan, China was higher on both economic inequality and self-enhancement. The Gini index has soared from 27.7 in 1984 to 42.1 in 2009 in China (with 0 representing perfect equality and 100 perfect inequality; the World Bank, 2014). By this calculation, the level of self-enhancement in China would have been quite muted only a couple of decades ago.

The above analyses suggest that the rising self-enhancement in China may be rooted in both socioeconomic and cultural changes. The current research aims to provide further support for the link between the changing socioeconomic and cultural reality of China and its elevated self-enhancement. In doing so, we do not prioritize the causal role

of either socioeconomic or cultural change. Rather, we invoke the overarching term of sociocultural change to indicate that the socio-structural and the cultural are interwoven (Markus & Hamedani, 2007). In at least urban China, sociocultural change seems to have resulted in the increasing coexistence of its traditional cultural heritage and contemporary, individualistic culture as direct product of socioeconomic transitions (Zhang et al., 2015). As such, contemporary Chinese may draw, to varying degrees, from these relatively distinct cultural resources to arrive at an understanding of themselves (cf. Lu & Yang, 2006). We sought to demonstrate that the rising self-enhancement that may have originated in China's economic transition is also embedded in what we regard as contemporary form of Chinese culture. In other words, exposure to or identifying with contemporary Chinese culture should be uniquely associated with more positive self-evaluations.

### **Overview of Current Research**

In this article, we operationalize self-enhancement primarily in terms of the better-than-average effect (BTAE). The BTAE refers to a form of self-aggrandizing social comparison, in which people compare their characteristics favorably against the average standing of their peers (Alicke & Govorun, 2005). In Study 1, we examined the BTAE among Chinese as a function of individual differences in the levels of identification with traditional vs. contemporary Chinese culture. We also compared Chinese with Chinese Canadians on the mean levels of the BTAE. Study 2 was designed to replicate the main findings of Study 1 among Chinese with a modified BTA measure. Finally in Study 3, we sought direct causal evidence for differential effects of traditional vs. contemporary Chinese culture by adopting a cultural priming paradigm.



A methodological point of clarification is in order. Current perspectives maintain that both motivational and nonmotivational mechanisms account for the BTAE (Alicke & Sedikides, 2009; Chambers & Windschitl, 2004). Part of the debate over the universality of self-enhancement revolved around whether the BTAE is a valid measure of self-enhancement (Heine & Hamamura, 2007; Hamamura, Heine, & Takemoto, 2007). It should be noted that the presence of cognitive mechanisms does not invalidate the BTAE in and of itself given clear evidence for the motivational underpinning of the BTAE (Beer, Chester, & Hughes, 2013; Brown, 2012; Guenther & Alicke, 2010). However, we adopted a variety of strategies to mitigate the potential impact of cognitive confounds.

First, the motivational account of the BTAE hinges on people being invested in what they are asked to evaluate (Sedikides & Strube, 1997). Thus, we accounted for trait desirability or importance when measuring the BTAE in two ways. The BTAE was calculated as ratings averaged across those traits judged to be important or desirable (Brown, 2012). We also followed Loughnan et al. (2011) in operationalizing the BTAE ideographically. That is, we computed within-person correlations between trait ratings and importance or desirability ratings across all traits. Second, one particular concern is that the cognitive process involved in processing singular vs. distributional information underlies the BTAE (Klar & Giladi, 1997). Because distributional information such as an average person or most other people requires more effort to process, people may fail to adequately evaluate a group aggregate compared with a single entity, which results in over-weighting of information related to singular target in a BTA judgement. This cognitive interpretation suggests that any individual other than the self may be rated as better than average, the phenomenon termed “everyone is better than their group’s

average effect” (EBTA; Klar & Giladi, 1997). We circumvented the EBTA by asking people to compare themselves with an individual (Study 2). Third, we utilized bias-free measures of self-enhancement (Studies 1 & 2).

### **Study 1: Within-Culture and Cross-Cultural Comparisons**

As an initial test of the role of sociocultural change in augmenting Chinese BTAE, we employed within-culture and cross-cultural methods in this study. For each method, we briefly explain the goal and the theoretical rationale.

The primary goal was to assess the strength of personal identification with traditional and contemporary Chinese cultures respectively within a Chinese sample in order to predict the BTAE. Based on previous findings that Chinese students were able to differentiate contemporary Chinese culture from its traditional form in a number of basic values (Zhang et al., 2015), we expected cultural identification to parallel such distinction. We predicted that contemporary identification would be positively correlated with the BTAE and/or traditional identification negatively with the BTAE (*the within-culture hypothesis*). This prediction was based on the premise that the societal-level effect on the BTAE could be unpacked as individual differences in the extent of embracing the changing culture or remaining loyal to the cultural tradition. Cultural members can choose to identify or disidentify with their culture to signal whether they accept or reject its core knowledge tradition (Wan, Dach-Gruschow, No, & Hong, 2011). A strong sense of personal connection with one's group or culture can, at least in some cases, accentuate the need to follow its norms (Jetten, Postmes, & McAuliffe, 2002; Terry & Hogg, 1996).

As a second goal, we compared the average levels of the BTAE between Chinese and Chinese Canadians. The reason for selecting Chinese Canadians as a comparison group was to compare Chinese with an ethnic Chinese group outside of China that is not directly exposed to contemporary Chinese culture. If self-enhancement is rising in China, Chinese descendants outside of China such as Chinese Canadians should be unaffected by this relatively recent phenomenon. However, given the pervasiveness of self-enhancement in North America (Heine et al., 1999), one could reasonably expect Chinese Canadians to have acculturated to the mainstream Canadian culture and hence to be more self-enhancing as well. Indeed, a meta-analysis on self-enhancement showed that Asian Americans fall in between European Americans and East Asians (Heine & Hamamura, 2007). In other words, even if Chinese are becoming more self-enhancing, on the whole it is not clear whether their increased self-enhancement has attained the same level as that of their Chinese Canadian counterparts. As such, we did not make a prediction and merely explored how Chinese would compare with Chinese Canadians.

## **Method**

### **Participants and Procedure**

Chinese participants were recruited from a Chinese crowdsourcing website and completed an anonymous survey in exchange for monetary payment (about \$ 2 US). A total of 124 university students in Shanghai participated (77 female, one unspecified). The mean age was 21.76 years ( $SD = 2.68$ ). The Chinese Canadian sample consisted of 81 introductory psychology students at a Western Canadian University (57 female) with a mean age of 19.23 years ( $SD = 1.71$ ). About half (54.3 %) were born in Canada and of those foreign-born, their mean length of time in Canada was 10.63 years ( $SD = 3.94$ ).

Thus, our Chinese Canadian participants seemed to have relatively little direct contact with contemporary Chinese culture. To make the procedure as equivalent as possible, the Canadian participants completed an anonymous questionnaire online in a computer lab in small groups. The Chinese and Chinese Canadian participants completed the survey in Chinese and English respectively.

### Measures

**BTA measure.** Participants were first asked to evaluate themselves in comparison to most other university students on 32 traits on a 9-point scale ranging from 1 (*bottom 10%*) to 10 (*top 10%*). These traits were selected from a longer list in Loughnan et al. (2011) that sampled all domains of basic values and Big Five personality factors (Table 1)<sup>1</sup>. Next, participants in both countries rated the same set of traits in terms of social desirability, that is, the extent to which each trait was what university students generally want. Trait desirability was rated on a 7-point scale ranging from 1 (*not at all desirable*) to 7 (*very much desirable*). The orders in which these traits appeared for BTA and desirability ratings were randomized for each participant. The BTA measure was originally developed in English. It was translated into Chinese and back-translated to ensure linguistic equivalence.

As an alternative measure of self-enhancement, we asked both groups to indicate the extent to which they were satisfied with their self-image on a 7-point scale (1 = *very much dissatisfied*, 7 = *very much satisfied*). Heine and Hamamura (2007) argued that satisfaction with self was one of the methods that are free from the cognitive biases that may undermine the validity of a comparative judgment measure.

**Cultural identifications.** Based on previous work (Cameron, 2004; Luhtanen & Crocker, 1992), we developed 12 items to assess cultural identifications, with 6 measuring traditional Chinese identification and 6 tapping contemporary Chinese identification (e.g., “I would describe myself as a traditional/contemporary Chinese person”; “In general, traditional/contemporary Chinese values are an important part of my self-image”). They were rated on separate 7-point scales (1 = *strongly disagree*, 7 = *strongly agree*). We submitted the ratings to an EFA using principal axis factoring with oblimin rotation. An inspection of the eigenvalues and the scree plot clearly supported two factors representing traditional and contemporary identification respectively and each item loaded on the intended factor. After averaging across the relevant items ( $\alpha_{\text{traditional}} = .88$ ;  $\alpha_{\text{contemporary}} = .88$ ), the two identification measures were found to be positively correlated,  $r = .68$ ,  $p < .001$ , and they did not differ from each other ( $M_{\text{traditional}} = 4.86$ ;  $M_{\text{contemporary}} = 4.95$ ),  $p = .21$ . The positive correlation may reflect participants’ identification with the shared cultural heritage between the two forms of Chinese culture. To test the unique effect of traditional vs. contemporary identification on self-enhancement, we thus controlled for their shared variance in all the following analyses.

## Results

To identify socially desirable traits, for each of the 32 traits within each group, the mean desirability rating was compared to the scale midpoint. A series of one-sample  $t$  tests resulted in 26 socially desirable traits in both groups ( $ps < .001$ ; see Table 1). Thus, we averaged the BTA ratings on these 26 traits to form an index of the BTAE on desirable traits. As mentioned above, we also operationalized the BTAE in terms of the

within-person associations between BTA and desirability ratings across all 32 traits, thus also accounting for individual variation in evaluating the social desirability of those traits.

### **Within-Culture Comparison**

**Desirable traits and cultural identifications.** Given the positive association between these two identification measures, we regressed the BTA ratings onto both variables simultaneously to tease apart their unique effects. Whereas contemporary identification uniquely predicted a stronger BTAE,  $\beta = .38, p = .001, 95\% \text{ CI } [.17, .66]$ , traditional identification did not predict a weaker BTAE,  $\beta = .07, p = .55, 95\% \text{ CI } [-.16, .30]$ .

**Within-person associations and cultural identifications.** To compute within-person associations, we regressed the BTA ratings onto the desirability ratings across all 32 traits within each participant. Because both measures were nested within persons, we used hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002). Specifically, we tested random slope models<sup>2</sup>. Trait desirability as the within-person (level 1) predictor was person centered. That is, it was centered around each participant's own mean desirability rating. Given the positive association between the two identification measures, they were then entered as person-level moderators simultaneously (level 2) in order to estimate their unique effects. Both variables were grand mean centered. To further disentangle the within-person from the between-person effects, we also included every participant's mean trait desirability (grand mean centered) in the intercept of the level-2 model (see Raudenbush & Bryk, 2002, pp. 134-141). The same centering methods and the separate modeling of the between-person component were employed in all the following HLM analyses.

Results showed that the cross-level interactions were not significant: contemporary identification,  $b = .01$   $p = .87$ ; traditional identification,  $b = .04$ ,  $p = .34$ . That is, neither identification moderated the associations between BTA ratings and social desirability<sup>3</sup>. Thus, our within-culture hypothesis did not receive support from the analysis of within-person associations.

**Satisfaction with self and cultural identifications.** Satisfaction with self was regressed onto both identification measures simultaneously. Contemporary identification predicted higher satisfaction with self:  $\beta = .25$ ,  $p = .03$ , 95% CI [.03, .57]; unexpectedly, so did traditional identification:  $\beta = .20$ ,  $p = .08$ , 95% CI [-.02, .49].

### Cross-Cultural Comparison

Preliminary analyses examined potential demographic differences between the groups. They did not differ significantly in gender distribution,  $p = .25$ . However, the Chinese group was significantly older,  $t(199.86) = 8.22$ ,  $p < .001$ . For the following analyses, we compared the results with or without controlling for age.

**The BTAE on desirable traits.** Surprisingly, a  $t$ -test showed that Chinese participants ( $M = 7.31$ ,  $SD = 1.08$ ) showed a stronger BTAE than did Chinese Canadian participants ( $M = 6.53$ ,  $SD = 1.07$ ),  $t(203) = 5.09$ ,  $p < .001$ ,  $d = .73$ , 95% CI [.48, 1.08] (Figure 1a). Importantly, the difference remained significant when age was controlled for,  $p < .001$ .

**Within-person associations.** Similar HLM analyses were conducted in which trait ratings were regressed onto desirability ratings within each participant. Group membership was dummy-coded as the person-level (level 2) moderator (Chinese = 0, Chinese Canadians = 1). Results indicated that the moderating effect of group

membership was significant,  $b = -.15$ ,  $p = .01$ , 95% CI  $[-.26, -.03]$ . The Chinese participants showed a stronger BTAE ( $b = .45$ ,  $p < .001$ , 95% CI  $[.38, .52]$ ) relative to the Chinese Canadian counterparts ( $b = .30$ ,  $p < .001$ , 95% CI  $[.21, .39]$ ). Controlling for the group difference in age attenuated the effect,  $b = -.12$ ,  $p = .07$ , although essentially the same pattern remained (Chinese:  $b = .44$ ,  $p < .001$ , 95% CI  $[.36, .52]$ ; Chinese Canadian:  $b = .32$ ,  $p < .001$ , 95% CI  $[.22, .42]$ ).

**Satisfaction with self.** Compared with the Chinese Canadian participants ( $M = 4.54$ ,  $SD = 1.57$ ), the Chinese participants were also more satisfied with themselves ( $M = 5.02$ ,  $SD = 1.19$ ),  $t(138.60) = 2.35$ ,  $p = .02$ ,  $d = .35$ , 95% CI  $[.08, .89]$  (Figure 1b). This difference was not attenuated after controlling for age,  $p = .04$ .

### Discussion

The main purpose of Study 1 was to test whether the BTAE would be predicted by stronger contemporary Chinese identification and/or weaker traditional Chinese identification. The evidence for this hypothesis was mixed. Contemporary identification was a unique and positive predictor of the BTA ratings on desirable traits, which lends support to the hypothesis. Traditional identification, however, did not uniquely predict the BTAE. When the trait-desirability associations were examined, they were predicted by neither traditional nor contemporary identification. Both findings contradict our hypothesis. Similarly mixed evidence was also found for their associations with satisfaction with self.

As a second, exploratory goal, we compared the mean levels of self-enhancement between Chinese and Chinese Canadians. Overall, the Chinese participants evinced a stronger BTAE than their Chinese Canadian counterparts. We replicated the group



difference on the alternative measure of satisfaction with self, so the cross-cultural difference appeared to be consistent. However, because this finding contradicts the conclusion of a previous meta-analysis (Heine & Hamamura, 2007), careful replications are needed before any general conclusion can be drawn as to whether the magnitude of the Chinese self-enhancement reported here represents an exception rather than the rule. Although both Chinese and Chinese Canadian participants consisted of student samples, they might have been unequal in some other aspects that caused the Chinese sample to be more self-enhancing.

### **Study 2: The Motivational Underpinning of Chinese BTAE**

Study 2 was designed to address the main limitation of Study 1 that the BTA measure was conflated with the ETBA. In Study 1, we tackled this methodological issue indirectly, via the inclusion of a bias-free measure of self-enhancement. In this study, we sought to directly unconfound the ETBA bias from the motivational impetus for the BTAE. To do so, we asked Chinese participants to compare themselves with an individual instead of a group aggregate. If the putative mechanism of Chinese BTAE is primarily motivational, Chinese people should continue to evaluate themselves better than an individual target on positive traits. Thus, we expected to replicate the main findings of the within-culture analysis in Study 1.

By removing the ETBA effect, we also hoped to shed light on why we failed to find support for the hypothesized relations between the BTAE and traditional identification in Study 1. We suspected that the ETBA effect was in part, at least, responsible for the counterintuitive finding that traditional identification was a positive predictor of desirable BTA traits and the null finding with regard to predicting the trait-

desirability associations. Furthermore, we included another bias-free measure of self-enhancement: global self-esteem (Heine & Hamamura, 2007).

Our final goal was to look for contextual variation in Chinese BTAE. We manipulated the individual comparison target such that half of our participants compared themselves with a peer, while the other half with their parent. Self-enhancement motivation is argued to operate under the constraints of a number of competing forces (Alicke & Sedikides, 2009). Pertinent to this study were the findings that close relationships or priming cooperation tend to invoke a more modest self-presentation (Takata, 2003; Tice, Butler, Muraven, & Stillwell, 1995). More importantly in the Chinese context, we viewed sociocultural change in China as coexisting with, rather than sweeping away, its longstanding cultural heritage. In another series of studies, we found that core Chinese values, those rated highest in perceived importance, were more resistant to change (Zhang et al., 2015). One such core Chinese virtue is filial piety (Ho, 1996). Thus, we also predicted that the average magnitude of the BTAE would be curtailed when comparisons were made with one's parent.

## **Method**

### **Participants**

Participants were 94 undergraduates from a university in Beijing, who volunteered for this study (73 female, one unspecified). The mean age was 22.48 ( $SD = 1.76$ ).

### **Measures and Procedure**

The Chinese participants were randomly assigned to one of two individual comparison targets. Half of them were presented with a short description of a fictitious

person. Following Hamamura et al. (2007), this person was described as a fellow student who majors in psychology at the participants' university and enjoys travelling and watching movies. The participants were instructed to imagine this fictitious peer to be the same sex as they were. They then provided their comparative evaluation on a 7-point scale (1 = *a lot worse than the person*, 7 = *a lot better than the person*). The other half were asked to evaluate themselves in comparison to their same-sex parent on a similar 7-point scale (1 = *a lot worse than my parent*, 7 = *a lot better than my parent*). In both conditions, self-evaluations were made on the same 32 traits used in Study 1.

On a separate page, the participants also indicated how important it is for them to possess those traits on a 7-point scale (1 = *not at all important to me*, 7 = *very much important to me*). We replaced the wording of social desirability with importance to be more consistent with the SCENT model. The participants also completed the Rosenberg self-esteem scale (Rosenberg, 1965) on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*;  $\alpha = .88$ ). Finally, the participants indicated their traditional and contemporary Chinese cultural identifications on the same measures ( $\alpha_{\text{traditional}} = .89$ ;  $\alpha_{\text{contemporary}} = .85$ ). Consistent with Study 1, the two identifications were positively correlated,  $r = .56$ ,  $p < .001$ , and did not differ from each other ( $M_{\text{traditional}} = 4.63$ ;  $M_{\text{contemporary}} = 4.73$ ),  $p = .29$ .

## Results

### Contextual Variation in the BTAE

**Important traits.** In both conditions, the same 24 traits were judged to be significantly above the midpoint of the importance scale ( $ps < .001$ ; see Table 1) and as a result, the BTA ratings on them were averaged. When the magnitude of the BTAE was

compared across conditions, the participants tended to self-enhance more in comparison to a peer ( $M = 4.62$ ,  $SD = .68$ ) than their parent ( $M = 4.46$ ,  $SD = .55$ ), although the difference only approached significance,  $p = .11$ , one-tailed,  $d = .26$ , 95% CI [-.09, .41]. The BTAE was substantial in both conditions (compared with the midpoint, peer:  $p < .001$ ,  $d = .91$ ; parent:  $p < .001$ ,  $d = .84$ ).

**Within-person associations.** HLM estimating the average within-person associations between BTA and importance ratings across all 32 traits revealed that trait importance was a significant predictor,  $b = .21$ ,  $p < .001$ , 95% CI [.16, .27]. In terms of the hypothesized conditional difference, dummy-coded conditions (parent = 0, peer = 1) were entered as the person-level moderator. The moderating effect was significant,  $b = .15$ ,  $p = .004$ , 95% CI [.05, .24]. The trait-importance associations were stronger in comparison to a peer ( $b = .29$ ,  $p < .001$ , 95% CI [.22, .36]) relative to parent ( $b = .14$ ,  $p < .001$ , 95% CI [.07, .21]).

### **The BTAE and Cultural Identifications<sup>4</sup>**

**Important traits.** We regressed the BTA ratings on both identifications simultaneously. Contemporary identification still uniquely predicted a stronger BTAE,  $\beta = .41$ ,  $p = .001$ , 95% CI [.13, .48]. Traditional identification now predicted a weaker BTAE,  $\beta = -.25$ ,  $p = .04$ , 95% CI [-.28, -.01]. Thus, our prediction was fully supported here.

**Within-person associations.** Similar to Study 1, we entered both identification variables as person-level moderators simultaneously in the HLM equation. This resulted in the predicted Importance x Traditional Identification cross-level interaction: traditional identification predicted weaker trait-importance associations ( $b = -.07$ ,  $p = .01$ , 95% CI [-

.12, -.02]; see Figure 2). There was also a trend for the predicted Importance x Contemporary Identification cross-level interaction ( $b = .06, p = .11, 95\% \text{ CI } [-.02, .13]$ ). That is, contemporary identification predicted stronger trait-importance associations.

### **Self-Esteem and Cultural Identifications**

When self-esteem was regressed onto both identification measures simultaneously, contemporary identification uniquely predicted higher self-esteem: contemporary:  $\beta = .34, p = .006, 95\% \text{ CI } [.08, .47]$ , whereas traditional identification did not:  $\beta = -.05, p = .70, 95\% \text{ CI } [-.18, .12]$ .

### **Discussion**

By removing the EBTA effect that has been argued to inflate the magnitude of self-enhancement assessed by BTA measures, Study 2 extended the main findings of Study 1 and demonstrated that motivation seems to underlie the rise in Chinese self-enhancement. A summary of the findings is as follows. First, Chinese participants continued to rate themselves better than an individual target. Second, we found strong support for the differential effects of traditional vs. contemporary identification on self-enhancement. On the one hand, contemporary identification uniquely predicted a stronger BTAE on important traits, stronger trait-importance associations (albeit non-significantly), and higher self-esteem. On the other hand, when comparisons were made with an individual, traditional identification did predict a weaker BTAE on important traits and weaker trait-importance associations. Finally, we found some evidence that the BTAE differed as a function of interpersonal contexts. As predicted, Chinese participants were more reluctant to claim superiority over their parents but only in terms of the trait-

importance associations. This is consistent with the notion that the display of self-enhancement is discouraged in the family context<sup>5</sup>.

### **Study 3: Cultural Priming**

Although Studies 1 and 2 were consistent in linking contemporary culture identification with more favorable self-evaluations, they were nonetheless correlational. Instead of contemporary identification leading to more self-enhancement, it is plausible that Chinese self-enhancers simply inflated their reports of contemporary identification and traditional identification to some extent. In addition, results from cross-cultural comparisons provided indirect evidence only. In the last study, we sought direct evidence for the causal role of contemporary Chinese culture. To demonstrate causality, we adopted the cultural priming paradigm. The cultural priming paradigm draws on the social cognitive principle that when contextual cues make a body of cultural knowledge accessible, it momentarily increases the likelihood that this body of knowledge will be used. We extended this paradigm to testing the causal role of change within the same culture. Our hypothesis was straightforward: Priming contemporary Chinese culture would augment the self-enhancement tendency relative to priming traditional Chinese culture.

We used culturally indexical icons as cultural primes (Hong, Morris, Chiu, & Benet-Martínez, 2000). We noted that icons commonly used to prime Chinese culture, because of their historical significance (e.g., the Great Wall, Chinese dragon, and Confucius), tend to tap cultural knowledge more closely related to traditional Chinese culture. Thus, several Chinese icons used in previous cultural priming research served as traditional Chinese primes in this study.

## Method

### Participants

Participants were 186 university students and university educated adults in Shanghai<sup>6</sup> recruited from the same crowdsourcing website as those in Study 1. They completed the study in exchange for monetary payment (about \$ 2). We employed a few exclusion criteria in order to identify those who might not have completed the study as intended. First, we used Oppenheimer, Meyvis, and Davidenko's (2009) instruction check to identify those who were inattentive. In the middle of the experiment, participants were presented with a Likert-type scale from 1 to 9 and the number 99 beside it. The instruction read "Please click on 99. Do not click on the scale items that are labelled from 1 to 9". Data from those who responded with 1 to 9 were removed. Second, some participants did not write anything down during the priming phase and their data were excluded. Finally, those who took either an impossibly short time (i.e., shorter than how long the priming phase took) or too long a time (i.e., more than an hour) to complete the study were also excluded. The final sample size was 163 (103 female, 11 unspecified)<sup>7</sup>. The mean age was 24.41 years ( $SD = 6.21$ ).

### Measures and Procedure

Participants were asked to complete two short, unrelated studies. In the first "study", we followed a standard cultural priming procedure used in previous research (Hong et al., 2000). Participants were asked to view 8 pictures in succession and write down their answers to the following questions: "What is the object/figure in the picture?"; "What are the ideas represented by the object/figure in the picture?" They were randomly assigned to view pictures of traditional Chinese culture ( $n = 59$ ), contemporary

Chinese culture ( $n = 49$ ), or culture-neutral pictures (different weather conditions;  $n = 55$ ). Each slide lasted for one minute before the next one came up. Immediately following the last picture, participants completed the same BTA measure used in Study 1 on a 9-point scale. The only difference was that for brevity, 24 instead of 32 traits were used (see Table 1).

### **Pilot Test of Priming Stimuli**

In selecting Chinese culture priming materials for pilot testing, we focused on images uniquely associated with traditional or contemporary Chinese culture. For contemporary culture primes, we searched for pictures that reflect contemporary symbols of China. For traditional culture primes, we started with Chinese images used in previous cultural priming research and added a few more to match the contemporary images in terms of content domains. This resulted in an initial list of 39 pictures representing traditional and contemporary Chinese culture. These pictures were then presented to 27 Chinese international students studying at a Canadian university (25 female;  $M_{\text{age}} = 20.78$ ). They had spent an average of 2.33 ( $SD = 1.54$ ) years in Canada. They rated each picture in term of the extent to which it represented traditional or contemporary Chinese culture (1 = *very traditional*, 7 = *very contemporary*) and how Chinese or foreign it was (1 = *completely foreign*, 7 = *completely Chinese*). We performed a series of  $t$  tests to identify those pictures which were uniquely associated with either traditional or contemporary Chinese culture and which were considered primarily Chinese in origin. Based on these criteria, we narrowed down to 8 pictures of traditional Chinese culture and 8 pictures of contemporary Chinese culture<sup>8</sup>, which we adopted for this study (see Figure 3 for sample pictures).



## Results

### The BTAE on Desirable Traits

Twenty-one traits were judged to be desirable, so the BTA ratings on them were averaged (see Table 1). The priming conditions did not differ in age or gender distribution. Although the female participants showed a marginally stronger BTAE ( $p = .09$ ), gender did not interact with priming ( $p = .39$ ), so it was not considered further.

A one-way ANOVA performed on the mean BTA ratings revealed a significant priming effect,  $F(2, 160) = 3.62, p = .03, \eta_p^2 = .04$ . Supporting our prediction, post-hoc comparisons with Tukey's test showed that contemporary Chinese primes ( $M = 7.01, SD = .87$ ) elicited a stronger BTAE relative to traditional Chinese primes ( $M = 6.53, SD = 1.10$ ),  $p = .02, d = .47, 95\% \text{ CI } [.05, .89]$ . The BTAE in the control condition ( $M = 6.70, SD = .71$ ) fell between the two priming conditions,  $ps > .21$  (see Figure 4). Another one-way ANOVA performed on the mean trait desirability showed no significant difference as a function of priming,  $p = .36$ . Thus, priming contemporary culture did not result in an increase in mean trait desirability.

### Within-Person Associations

Similar HLM analyses were conducted with priming conditions entered as two dummy-coded person-level moderators (Traditional = 0, Contemporary = 1, Control = 0; Traditional = 0, Contemporary = 0, Control = 1). The Desirability x Traditional-Contemporary Contrast cross-level interaction was significant,  $b = .25, p = .003, 95\% \text{ CI } [.09, .42]$ . Whereas the average trait-desirability associations were positive in the traditional priming condition ( $b = .32, p < .001, 95\% \text{ CI } [.21, .43]$ ), such associations were stronger in the contemporary priming condition ( $b = .57, p < .001, 95\% \text{ CI } [.45,$

.69]; see Figure 5a). In addition, the Desirability x Traditional-Neutral Contrast cross-level interaction was also significant,  $b = .19$ ,  $p = .02$ , 95% CI [.03, .35]. The trait-desirability associations were also stronger in the neutral condition,  $b = .51$ ,  $p < .001$ , 95% CI [.39, .62] (see Figure 5b). In fact, the neutral and the contemporary priming conditions did not differ from each other,  $p = .44$ .

### Discussion

Study 3 provided the first causal evidence for the role of contemporary Chinese culture in fuelling a stronger BTAE. The inclusion of a control condition also helps reveal a relatively strong default tendency to self-enhance in urban China, at least compared with the traditional priming condition. This tendency is particularly evident in the trait-desirability associations.

An alternative explanation for the observed results may be that given our use of the standard BTA measure, cultural priming simply influenced the nonmotivational components of the BTAE. We deem this possibility unlikely for two reasons. First, although cultural differences in the cognitive biases of the BTAE have not been fully investigated, the extant research points to no systematic differences (Hamamura et al., 2007; Rose, Endo, & Windschitl, 2008). Thus far, there is no empirical base to expect the cultural priming effects to occur through a purely cognitive mechanism. Second, Study 2 suggested that if anything, it is traditional culture that is associated with a stronger EBTA effect. If so, such possibility would have actually worked against our hypothesis. The hypothesized results were nonetheless confirmed.

Although priming contemporary culture led to a stronger BTAE, we found no evidence that it occurred via enhanced trait desirability. Given that cultural priming has

been shown to operate through the normative route, that is, by making salient a particular culture's consensual beliefs (Hong, 2009; Zou et al., 2009, Study 4), contemporary Chinese primes may have activated a more permissive norm of self-promotion instead of increasing perceived desirability of traits. Although we did not measure norms in the present study, there was some indication of the declining importance of modesty in urban China as a cultural value in other research (Cai, 2012). In our own research where two urban Chinese samples were asked to indicate their perceptions of traditional and contemporary Chinese cultural values (Zhang et al., 2015), it was found that being humble, which is conceptually analogous to modesty, was rated less important in contemporary culture (Shanghai sample:  $M_{TC} = 6.18$ ,  $M_{CC} = 5.15$ ,  $p = .002$ ; Beijing sample:  $M_{TC} = 6.34$ ,  $M_{CC} = 5.33$ ,  $p = .003$ ). While past research indicates that Chinese people tend to self-enhance in more indirect or culturally appropriate ways because of modesty concerns (Cai et al., 2011; Kim et al., 2010), results from this study suggest that contemporary Chinese culture may be affording an expansion of direct and indirect self-enhancement strategies.

## **General Discussion**

### **Summary of Main Findings**

We set out to test the hypothesis that sociocultural change is augmenting the tendency to make positive self-evaluations in China. Results from three studies provided converging evidence in support of the hypothesis. First, cross-cultural analyses revealed that although North Americans of Asian descent are generally more self-enhancing than East Asians as a result of acculturation (Heine & Hamamura, 2007), our Chinese participants were nonetheless more self-enhancing than their Chinese Canadian

counterparts (Study 1). Second, within the Chinese, identification with traditional vs. contemporary Chinese culture was differentially associated with the BTAE. Whereas contemporary identification predicted more positive self-evaluations (Studies 1 and 2), traditional identification tended to, although not always, predict positive self-evaluations (Study 2). Third, we established the causal effect of contemporary culture on augmenting the BTAE (Study 3). Fourth, results from alternative measures of self-enhancement and a modified BTA measure in which the ETBA was circumvented suggested the motivational underpinning of the observed effects on standard BTA measures (Studies 1 and 2). Taken together, these findings suggest that Chinese self-enhancement may be more dynamic than previously thought. That is, within-culture change as well as intercultural contact may be transforming urban China into an increasingly multicultural space. The result is that in a manner analogous to other bicultural individuals (Hong et al., 2000; Lee, Oyserman, & Bond, 2010), urban Chinese have internalized traditional and contemporary Chinese cultures; insofar as contemporary culture is personally endorsed or situationally activated, Chinese people are likely more self-enhancing in their judgement of themselves. Yet, to the extent that contemporary culture is grounded in widespread cultural practices, the default self-evaluative tendency of urban Chinese people may even have shifted to being more self-enhancing.

### **Implications, Limitations, and Future Directions**

**Cultural differences in self-enhancement and its measurement.** Our research adds to the growing body of research on the culturally specific operation of self-enhancement among East Asians by bringing sociocultural change to the discourse. We provided, to our knowledge, the first line of evidence for contemporary Chinese culture

as a driver of rising self-enhancement in China. Although our research does not have a direct bearing on whether traditional East Asian cultures promote self-enhancement *per se*, we think that it does show evidence against what we consider an inadvertent tendency to portray self-enhancement as a static and entity-like phenomenon. First, one relatively unexamined implication of the mutual constitution of cultures and selves is that as cultures change, so do the selves inhabiting these spheres (Hamedani, Markus, & Fu, 2011; Twenge & Campbell, 2001). Our research places self-enhancement within a sociocultural context being restructured by macro-level changes and thus highlights the dynamic side of mutual constitution beyond merely a self-perpetuating cycle. Second, within-culture change renders cultural differences in self-enhancement less rigid and more context-specific. Sociocultural change in China is not a process of contemporary culture supplanting its antiquated form, but more likely the coexistence of the age-old cultural heritage and cultural upgrading catalyzed by economic globalization (Zhang et al., 2015). In support of this perspective, our studies indicate that Chinese self-enhancement varies as a function of cultural identification as well as interpersonal contexts. Therefore, an important future direction is to move beyond a trait theory of cultural differences in self-enhancement to a more detailed cultural analysis of how self-enhancement is negotiated by whom in concrete situations.

With regard to the measurement issues, we have taken steps to ensure that our results were not due to nonmotivational confounds that inflate the BTAE. We focused specifically on circumventing the EBTA effect given the concern it has received (Hamamura et al., 2007; Heine & Hamamura, 2007). There are other cognitive biases known to influence the comparative judgment process such as egocentrism and focalism

(Chambers & Windschitl, 2004). Such potential problems, however, were alleviated partly by the use of alternative assessments of self-enhancement that are presumably bias-free and partly by the fact that our primary interest was not the absolute BTAE levels, which are directly inflated by cognitive biases. Nevertheless, future research should utilize more diverse methodologies in order to corroborate the current findings. They include comparative measures that are less prone to biases such as the indirect method (Chambers & Windschitl, 2004; Rose et al., 2008), behavioral or indirect measures of self-enhancement (Heine & Hamamura, 2007), or indices based on alternative conceptualizations of self-enhancement (Church et al., 2014; Su & Oishi, 2011).

**East Asian heterogeneity.** Another implication of our findings is that East Asian self-enhancement (or lack thereof) might be more heterogeneous than previously thought (Boucher, 2010). It is plausible that contemporary Chinese are more self-enhancing than, for example, contemporary Japanese. However, we did not provide any direct evidence this research. We thus encourage future research on this front. Another interesting avenue of future research is whether other Asian societies such as Japan are also experiencing rising self-enhancement as a result of globalization. This is a complex issue as local cultures' reactions to globalization are likely to vary (Berger & Huntington, 2002). As such, the impact of globalization on even culturally similar countries may vary. We note the emergence of research at the intersection of globalization and culture (for a review, see Chiu, Gries, Torelli, & Cheng, 2011) and, particularly in the Japanese context, the work on the marginalization of Japanese youth (Norasakkunkit, Uchida, & Toivonen, 2012). This latter work questions the continued affordance of self-improvement motivations for high-risk Japanese youth. Thus, to understand self-enhancement in

contemporary East Asian societies, societal changes driven by globalization pressures need to be considered.

**Socioeconomic versus cultural explanations.** A related question that arises from this research is whether a socioeconomic or cultural theory best accounts for our findings. On the one hand, socioeconomic factors such as economic inequality (Loughnan et al., 2011) and the implementation of the one-child policy (Kwan et al., 2009) seem clearly implicated in rising Chinese self-enhancement. On the other hand, we showed that measuring or priming contemporary cultural identification that did not refer to specific socioeconomic realities was sufficient to increase self-enhancement.

We offer two points to reconcile this apparent contradiction. First, we adopted the sociocultural framework (Markus & Hamedani, 2007) that does not privilege either social structural or cultural factors, because they are not completely divorced from each other. There are likely to be cultural mechanisms that translate the macro-level effect of changes into the psychological level. Loughnan et al. (2011) suggested the mediation of increased competitiveness that results from economic inequality. Another mechanism, for which we provided some evidence, may be through the modesty norm becoming less important. Complementing the first point, we also argue that the sociocultural system may, at times, be internally tensioned. In other words, culture and society are not always in full agreement (Chiu & Chao, 2009). In the case of Chinese self-enhancement, it may be that competition for success and recognition sanctioned by the economic growth clashes with the Confucian hierarchical culture in which face is granted by fulfilling one's role and meeting others' expectations. Thus, socioeconomic effects may be constrained by preexisting cultural architecture (Hamamura, 2012). One implication is

that just because self-enhancement may be rising in China, it does not necessarily indicate a complete shift away from an interdependent, face culture.

**The function of identification with traditional culture.** Finally, compared with contemporary identification, traditional identification was not consistently associated with self-enhancement in the predicted direction. For instance, traditional identification was found to uniquely predict higher satisfaction with self. We speculate one reason for this inconsistency may be that a historically significant, collective tradition serves as a perennial fountain of personal meaning and existential security (Chiu et al., 2011). Thus paradoxically, traditional culture may function, in some cases, to affirm a positive self in the contemporary Chinese context. More targeted research is needed to investigate whether and when a positive attachment to a group's past can function to meet the psychological needs of its current members. For instance, to the extent that priming traditional Chinese culture evokes the feelings of pride and warmth toward the past, it might lead to more instead of less positive self-perceptions.



## Footnotes

<sup>1</sup>Due to a clerical error, the Chinese participants rated these traits on a 9-point scale instead of a 10-point scale. As such, their BTA ratings were converted to a 10-point scale for all the cross-cultural comparisons.

<sup>2</sup>In all 3 studies reported here, we estimated random slopes for desirability or importance ratings as predictor of the BTA traits. That is, we assumed that the slopes would be best modeled as random effects. Support for modeling random slopes was found in both the significant random slope variances and the likelihood ratio tests showing that each random slope model provided a significantly better fit than the corresponding random intercept model. Detailed results can be obtained from the first author.

<sup>3</sup>We conducted additional exploratory analyses to test the possibility that traditional and contemporary interacted with each other to predict the BTAE-desirability associations. For instance, the BTAE-desirability associations might be strongest for high contemporary and low traditional identifiers. Results revealed a Desirability X Traditional Identification X Contemporary Identification three-way interaction,  $b = -.06$ ,  $p = .03$ . Whereas at the low levels (i.e. 1 SD below the grand mean) of traditional identification, contemporary identification predicted stronger BTAE-desirability associations ( $b = .06$ ,  $p = .22$ ), traditional identification also predicted stronger BTAE-desirability associations at low levels (i.e. 1 SD below the grand mean) of contemporary identification ( $b = .11$ ,  $p = .04$ ). We repeated the same analyses in Study 2 and failed to replicate a similar three-way interaction,  $b = -.01$ ,  $p = .61$ . Thus, it appears that the

interaction effect is either unreliable or due to the cognitive confounds present in the BTA measure used in Study 1a. We therefore made no attempt for an explanation.

<sup>4</sup>It is also possible that the strength of the effect of cultural identifications on self-enhancement varies across the target comparison conditions. To test such possibility, we added to the HLM model the Desirability X Traditional Identification X Condition (dummy-coded) and the Desirability X Contemporary Identification X Condition (dummy-coded) interactions along with all the lower-order interactions. Neither of the three-way interactions were significant:  $b = .06, p = .26$  (traditional);  $b = -.05, p = .48$  (contemporary). It should be noted that given our small sample size, there might not have been enough statistical power to detect such conditional effects. Although we did not predict cultural identifications would interact with interpersonal contexts to influence the magnitude of self-enhancement, we think it is an important question that should be addressed more systematically in future research.

<sup>5</sup>Another way of interpreting our target manipulation is that by assigning participants to compare themselves to either a peer who is a stranger or their parent who is a family member, we may be manipulating target familiarity instead. Thus, the fact that participants self-enhanced more in comparison to a stranger vs. a family member does not provide unique support for the effect of filial piety but that of a general distinction between ingroup and outgroup members. Because our argument is a context-specific case of this latter interpretation, more targeted research is needed in the future to test the role of family context in Chinese self-enhancement.

<sup>6</sup>This sample was more diverse than a typical undergraduate sample; it also consisted of some older university graduates as well as non-traditional and graduate

students. The fact that the BTA measure referenced most other university students as the comparison target raised the question of whether such social comparison would be equally relevant, particularly for the university graduates. To investigate this, we repeated the same analyses while controlling for age and its interaction with priming conditions, or whether the participant had graduated and the relevant interaction. The results remained essentially the same.

<sup>7</sup>Of those excluded, 9 were assigned to the traditional prime condition, 8 to the contemporary prime condition, and 6 to the neutral prime condition.

<sup>8</sup>The only exception to meeting all three criteria was the picture of Deng Xiaoping. An important political leader in China's recent history, he is widely regarded as the main architect behind China's economic reforms that commenced in the late 1970s. Perhaps because our young participants felt personally distant from this part of recent history, they rated him closer to a representation of traditional Chinese culture ( $M = 2.74$ ),  $p < .001$  compared with the midpoint. However, because of the significance of his legacy and the fact that he was still rated as less representative of traditional culture than most symbols chosen for traditional culture, we included his picture in the contemporary culture primes.

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Table 1

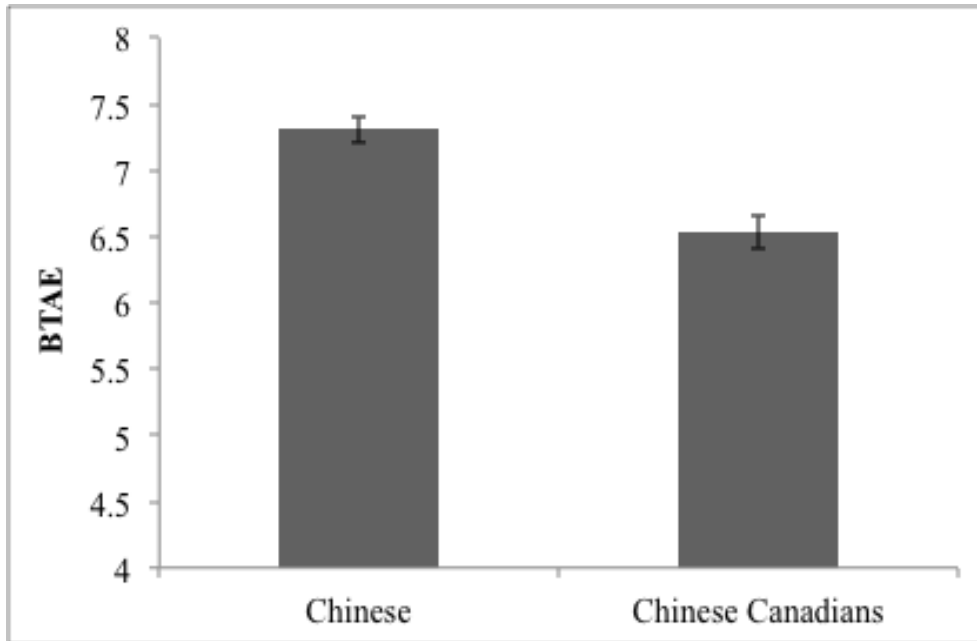
*Self-Evaluation Traits Used for the BTA Measures*

Studies 1 & 2 <sup>a</sup>			Study 3 <sup>b</sup>	
<i>Kind</i>	Conventional	<i>Ambitious</i>	<b>Kind</b>	<b>Hedonistic</b>
<i>Generous</i>	<i>Humorous</i>	<i>Forgiving</i>	<b>Trustworthy</b>	<b>Creative</b>
<i>Sociable</i>	<i>Broad-minded</i>	Selfish	<b>Assertive</b>	<b>Polite</b>
<i>Creative</i>	<i>Unique</i>	Moody	<b>Optimistic</b>	<b>Independent</b>
<i>Capable</i>	<i>Contented</i>	<b>Obedient</b>	<b>Sympathetic</b>	<b>Humble</b>
<i>Trustworthy</i>	<i>Confident</i>	<i>Humble</i>	<b>Confident</b>	<b>Helpful</b>
<i>Sympathetic</i>	Stubborn	<i>Efficient</i>	<b>Imaginative</b>	<b>Capable</b>
<i>Cheerful</i>	<i>Independent</i>	Shy	<b>Sociable</b>	<b>Daring</b>
<i>Polite</i>	Lazy	<b>Hedonistic</b>	<b>Cheerful</b>	<b>Unique</b>
<i>Daring</i>	<i>Optimistic</i>	<i>Helpful</i>	<b>Humorous</b>	Lazy
<i>Assertive</i>	<i>Imaginative</i>		<b>Ambitious</b>	Shy
			<b>Obedient</b>	Selfish

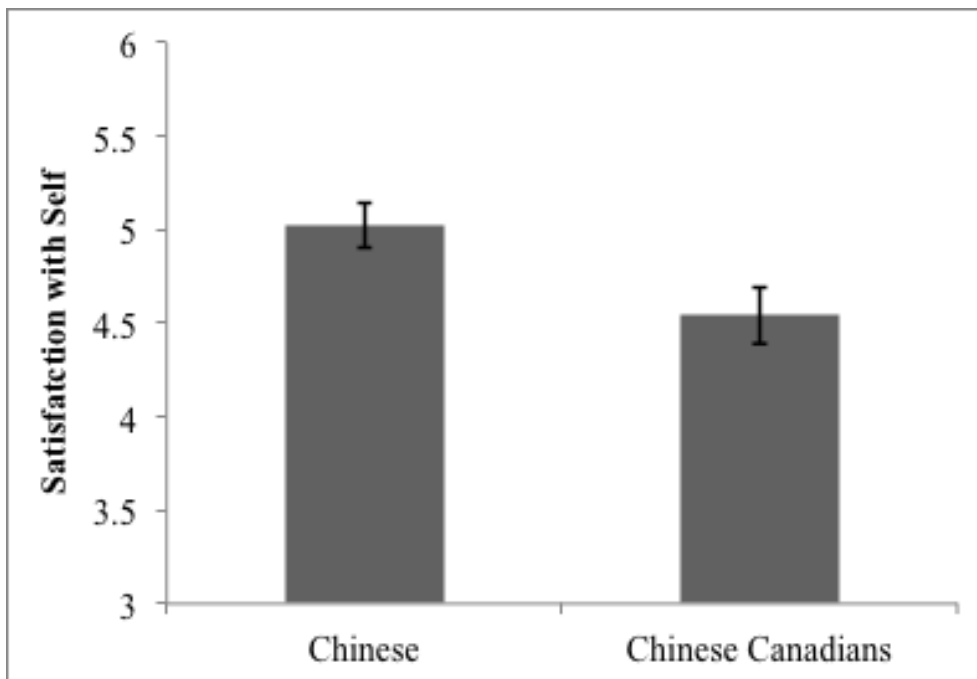
*Note.* <sup>a</sup> Desirable traits identified for Study 1 are in bold face; important traits identified for Study 2 are italicized.

<sup>b</sup> Desirable traits are in bold face.

(a)



(b)



*Figure 1.* Comparisons between Chinese and Chinese Canadians in (a) the BTAE on desirable traits (range: 1 to 10) and (b) satisfaction with self (range: 1 to 7). Error bars represent standard errors.

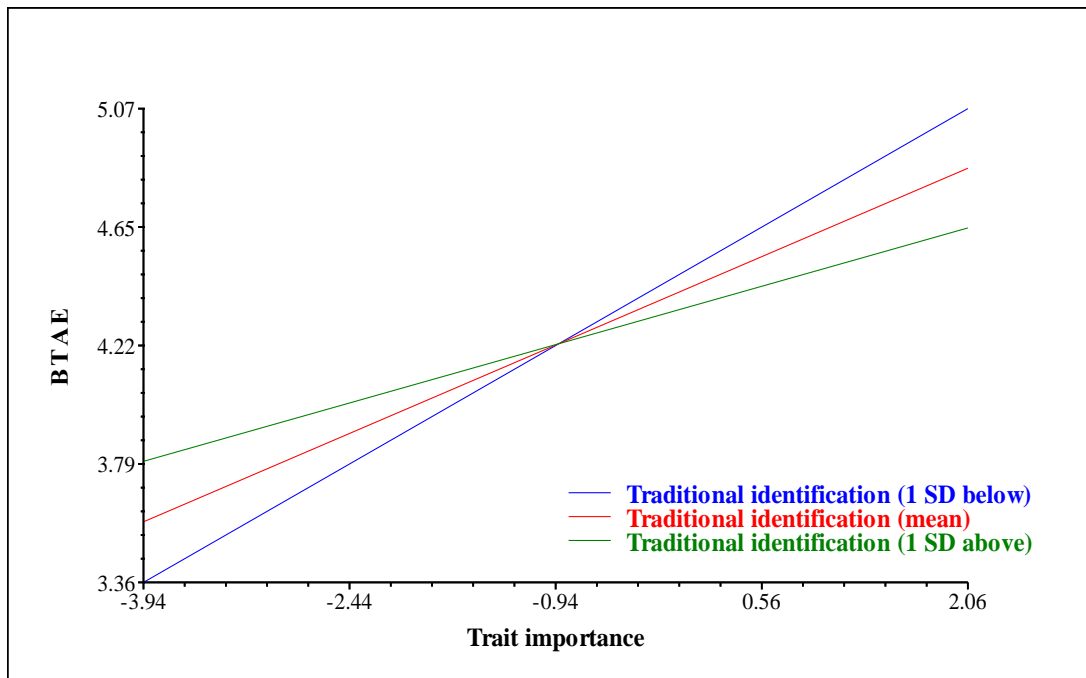


Figure 2. The strength of the within-person BTAE-importance associations as a function of traditional Chinese identification (Study 2).

A

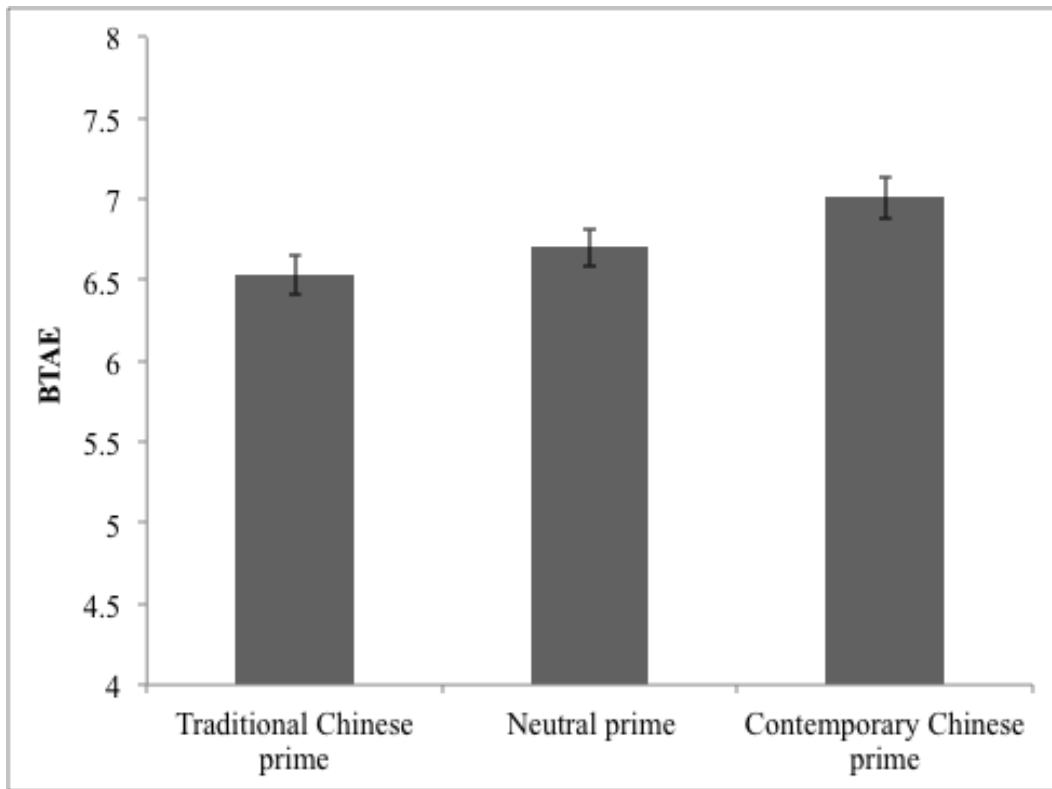


B



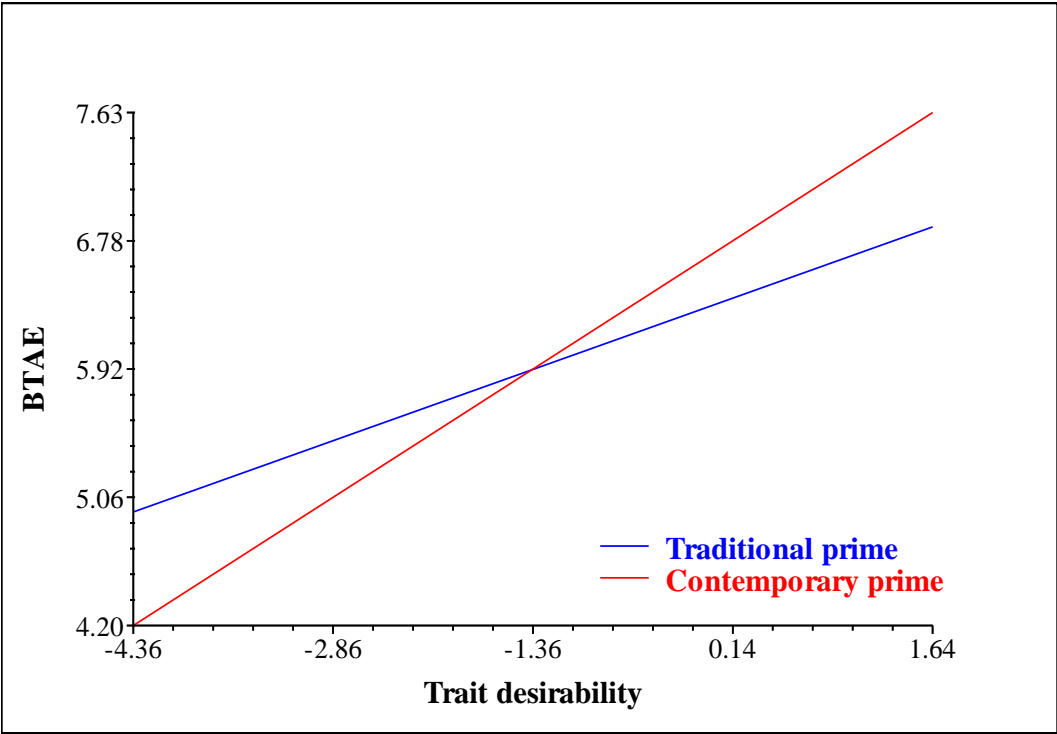
*Figure 3.* Sample pictures of Chinese primes (Study 3). Top panel (A): traditional Chinese prime. Bottom panel (B): contemporary Chinese prime.



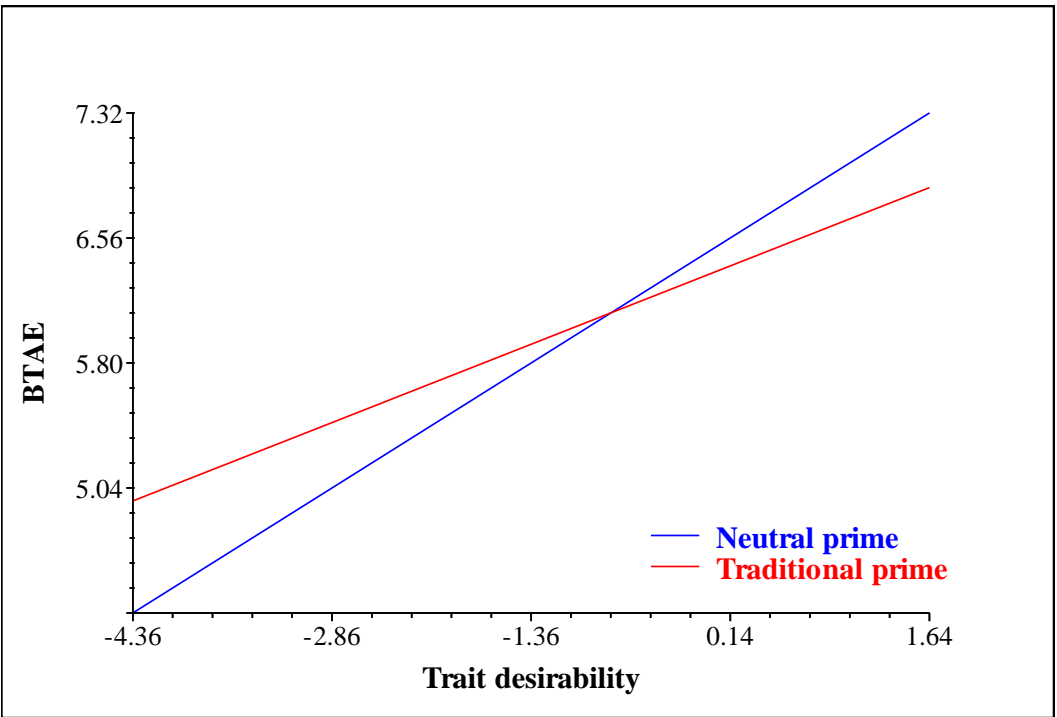


*Figure 4.* The strength of the BTAE on desirable traits (range: 1 to 9) as a function of priming conditions (Study 3). Error bars represent standard errors.

(a)



(b)



*Figure 5.* The strength of the within-person BTAE-desirability associations as a function of priming conditions (Study 3). Top panel (a): contrast between traditional and contemporary Chinese primes. Bottom panel (b): contrast between traditional Chinese and neutral primes.